5. (Amended) A structure according to claim 1, wherein the first layer has at least one even surface.

6. (Amended) A structure according to claim 1, wherein said structure further comprises a wire net which is fixed to the first layer or to the second layer.

7. (Amended) A structure according to claim 1, wherein said structure is sandwiched between a first wire net (14) and a second wire net (15), said first net (14) being located at the inlet side, said second wire net (15) being located at the outlet side, said first wire net having meshes which are smaller than the second wire net and having wires with a diameter which is thicker than the diameter of the wires in the second wire mesh.

9. (Amended) A structure according to claim 1, wherein said first layer is obtainable by means of a cold isostatic pressing operation.

REMARKS

Entry of the foregoing amendments prior to examination is respectfully requested.

Respectfully submitted,

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By _____

Glenn Law
Attorney for Applicant
Registration No. 34,371

FOLEY & LARDNER
Washington Harbour
3000 K Street, N.W., Suite 500
Washington, D.C. 20007-5109
Telephone: (202) 672-5426
Facsimile: (202) 672-5399

"VERSIONS WITH MARKINGS TO SHOW CHANGES MADE."

3. (Amended) A structure according to [any one of the preceding claims] claim 1, wherein said first layer comprises metal fibers with a diameter of less than 3 μm and wherein said second layer comprises metal fibers with a diameter of at least three times the diameter of the fibers in the first layer.

4. (Amended) A structure according to [any one of the preceding claims] claim 1, wherein said first layer has a weight ranging between 300 g/m_2 and 600 g/m^2.

5. (Amended) A structure according to [any one of the preceding claims] claim 1, wherein the first layer has at least one even surface.

6. (Amended) A structure according to [any one of the preceding claims] claim 1, wherein said structure further comprises a wire net which is fixed to the first layer or to the second layer.

7. (Amended) A structure according to [any one of claims 1 to 5] claim 1, wherein said structure is sandwiched between a first wire net (14) and a second wire net (15), said first net (14) being located at the inlet side, said second wire net (15) being located at the outlet side, said first wire net having meshes which are smaller than the second wire net and having wire with a diameter which is thicker than the diameter of the wires in the second wire mesh.

9. (Amended) A structure according to [any one of the preceding claims] claim 1, wherein said first layer is obtained by means of a cold isostatic pressing operation.

LAYERED FILTERING STRUCTURE

Field of the invention.

The present invention relates to a layered filtering structure which is adapted for micro-filtration purposes. The term "micro-filtration" refers to filtering structures which are able to retain particles with a maximum size of between 0.5 µm and 10 µm, in particular below 2 µm.

Background of the invention.

Presently available filter material for applications such as micro-filtration and for in situ cleanable filtration media conveniently comprise ceramic membrane layers fixed to the surface of porous sintered metal powder or metal fiber substrates. The high pressure drop across these filter laminates, however, is a considerable drawback since the filtering process requires additional energy due to the high pressure and robust mechanical supports for the filter layers. In addition, repeated backflushing is difficult and, after all, the ceramic layers are quite brittle, which adversely affects durability.

Summary of the invention.

It is an object of the present invention to avoid the drawbacks of the prior art.

It is also an object of the present invention to provide a filtering structure adapted for microfiltration without causing high pressure drops across the structure.

It is still another object of the present invention to provide a filtering structure which allows for repeated backflushing.

According to a first aspect of the present invention, there is provided a layered filtering structure which comprises at least a first layer and a second layer. Each layer comprises a web of metal fibers which have been sintered. The two layers are in contact with each other. The first layer, at the upstream side, so most close to the filter inlet side, has a porosity below 55 %. The second layer, at the downstream side, so closer to the filter outlet side, has a porosity which is at least 20 %